

OPTICAL CONNECTIVITY SOLUTION



molex

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Fiber Solution System Overview

Molex is the worldwide leader on connectivity solution. The high-performance products applied to severe operating environments in industrial, telecom, military and medical applications

Enclosure

Molex offers 1RU to 4RU types of MPO cassette storage enclosures for different customer demands. The 1RU type can support 3 MPO cassettes storage with clean and simple design.

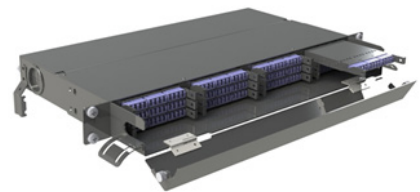
The 3RU enclosure and bracket can support up to 288 LC ports with 12 sets MPO cassettes. With excellent cable protection, cable guiding and fixing functions. These enclosures are user friendly and providing highest level protection for your valuable fiber terminations



HD Enclosure

Molex high density enclosure series are specifically designed to meet high density fiber and cable management system. It's an idea choice for data center, storage area network (SAN), local area network (LAN) and central office / headend application.

High density shelf racks are used to breakout MPO cable to LC connectors. It's compact size and support 12/24 ports LC output. HD Enclosure supports 144/192 LC ports with 1RU height.



Distribution Box

Molex fiber distribution box can manage fibers from 24 to 192 ports terminations in 1U to 6U rack space. The termination operations include outdoor main cable cutting, cable position fixing, cable jacket stripping, sub-cable extraction, glass fiber fusion protection, fiber routing management and protection. The extra cable storage can be all treated and well managed in this distribution boxes.



Terminal Box

In order to develop the complete network and faster, efficient optical system. Molex has the diversified box solutions available to meet the fiber connectivity requests. Widely applied in FTTx access network, outdoor application, optical fiber communication system, telecommunication networks and CATV networks. All outdoor boxes follow IP65 rated and good for UV/rainfall resistance. The modular, scalable design provides flexibility for network partitioning and future growth.



Accessories

In order to assist fiber network formation on cable management, Molex provides many accessories options for making installation conveniently. For example, bulkhead adapter plate, splice tray(s), bend radius bracket, cable management spool, fusion protection sleeve and so on. Molex also provides various pigtails and attenuators for fiber network infrastructure.

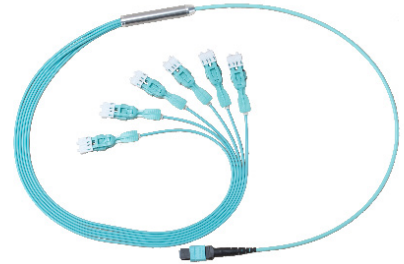


Pre-terminated Overview

Molex is the worldwide leader on connectivity solution. The high-performance products applied to severe operating environments in industrial, telecom, military and medical applications

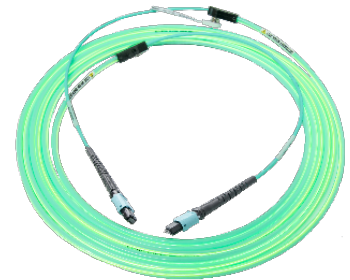
Harnesses Cables

Molex MPO multi-fiber cabling system is ideally suited for a high-density environment that demands space saving and innovative cable management solutions. MPO fan-out supports various connections from multi-fiber to single-fiber out. With highly integrated design and manufacturing capability, Molex can also provide customized products to help customers reduce network installation or reconfiguration time and cost.



LumaLink Cable

LumaLink Optical Trace Cable Assemblies with high density MPO connectors feature full illumination of the entire cable facilitate advanced cable management by providing 100% visual identification of start and endpoints, slack storage locations and routing



LGX Cassette

Molex presents high density MPO cassette system solution dedicated for emerging data center and cloud applications. Targeting at customer's storage space saving, and fiber management efficiency demand, we embed modular and scalability characteristics into the core of product design. Molex LGX cassettes are designed to be compatible with the industry standard LGX format. No field termination or testing required. Modular design can be expanded as needed.



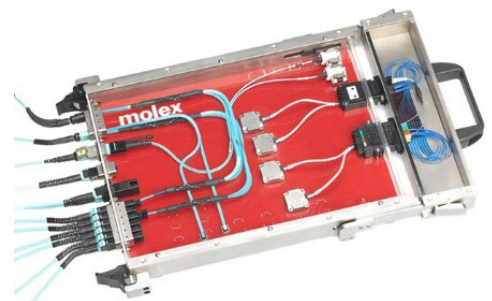
High Density Cassette

Molex high density cassette are specifically designed to meet high density enclosure and cable management system. The maximum connector capacity allows 24 LC fiber port and each series of HD cassette have special pluggable pin for easy installation. The MPO interconnect system platform can also be integrated with others Molex products, such as SFP+, QSFP, CFP modules, CWDM, DWDM Mux/DEMUX, optical switch arrays, EDFA, WSS, Circulator and all other products in Molex group.



Cable Assembly

The Optical Jumper Cable is designed for interconnection in all optical systems or components. Molex offers a wide range of industrial standard jumper cables with various fiber and fiber jacket types, connectors, and lengths. With highly integrated design and manufacturing capability, Molex provides customized products to help customers succeed better opportunities.



Standard Fiber Enclosure

Network growth and management is a key consideration when selecting a physical hardware solution. Molex enclosure approach takes the long view of LAN, SAN and data center design with cable management features that ensure maximum density and growth without disrupting service and saving space. Managed density allows network managers to efficiently pay for their network investment as it grows.

Molex offers various cassette / fiber storage enclosures for different demands. The rack and wall-mount, from 1RU to 4RU are available. The plug-and-play solutions are designed to address the reliability, scalability, and thermal needs of critical networks. It's applied to the main distribution area (MDA), backbone, and horizontal and equipment distribution areas. With excellent cable protection and cable guiding, fixing functions, these enclosures are user friendly and providing highest level protection for your valuable fiber management.

- 1U 19" rack mountable
- Compatible with standard LGX cassette and adapter panels
- 3 MPO cassettes, 72 LC ports capacity
- 2U 19" rack mountable
- Compatible with standard LGX cassette and adapter panels
- 6 MPO cassettes, 144 LC ports capacity
- Cable storage at the rear side
- 3U 19" rack mountable
- Compatible with standard LGX cassette and adapter panels
- 12 MPO cassettes, 288 LC ports capacity
- Cable storage at the rear side
- 4U 19" rack mountable
- Compatible with standard LGX cassette and adapter panels
- 12 MPO cassettes, 288 LC port capacity
- Cable storage at the rear side



PN: 1064800100



PN: 1064800101



PN: 1064800102



PN: 1064800103

Standard Rack Mount Fiber Enclosure

PN	Description	Maximum Capacity				Dimension(mm)
		LC Fiber Ports	Adapter Panel	MPO Module	Adapter	
1064800100	1RU	72	3	3	LC	482 x 275 x 44
1064800101	2RU	144	6	6	LC	482 x 312 x 89
1064800102	3RU	288	12	12	LC	482 x 312 x 133
1064800103	4RU	288	12	12	LC	482 x 305 x 175

Pre-terminated MPO Cassettes

Molex offers a family of pre-terminated MPO modules for high-density data centers. The MPO/ MTP cassette modules provide secure transition between MPO/MTP and LC or SC discrete connectors. They are used to interconnect MPO/MTP backbones with LC or SC patching. Pre-terminated and tested, these MPO modules provide instant field connections with guaranteed quality and performance.

MPO cassette are available for 8/12/24 MPO-LC/SC with SM and OM3/OM4 options. For standard LGX MPO cassette, Molex offers plastic and metal box. It suits to Molex 1864800 enclosure series. Modular system allows for rapid deployment of high density data center infrastructure as well as improved troubleshooting and reconfiguration during moves, adds and changes. (Refer attached1 for specification of optical performance)

- Pre-terminated and pre-tested module
 - Plastic LGX Box with 12F MPO to LC/SC
 - Compatible with Molex 1064800 series & LGX bracket
 - Designed for 10G/40G/100G system migration
 - TIA-568 Polarity A (Default), B or C
-
- Pre-terminated and pre-tested module
 - Plastic LGX Box with 1*24F MPO to LC
 - Compatible with Molex 1064800 series & LGX bracket
 - Designed for 10G/40G/100G system migration
 - TIA-568 Polarity A (Default), B or C
-
- Pre-terminated and pre-tested module
 - Plastic LGX Box with 2*12F MPO to LC
 - Compatible with Molex 1064800 series & LGX bracket
 - Designed for 10G/40G/100G system migration
 - TIA-568 Polarity A (Default), B or C
-
- Pre-terminated and pre-tested module
 - Metal LGX powder coating box with 1*12F MPO to LC/SC
 - Compatible with Molex 1064800 series & LGX bracket
 - Designed for 10G/40G/100G system migration
 - TIA-568 Polarity A (Default), B or C



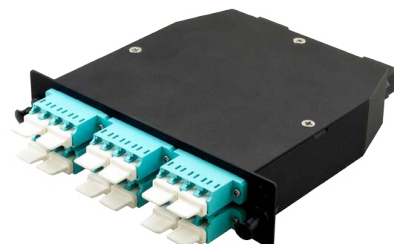
PN: 106481010x Series



PN: 106481011x Series



PN: 106481011x Series



PN: 106481012x Series

Standard Rack Mount Fiber Enclosure

PN	Description	Simplex SC Adapter	Duplex LC Adapter	Quad LC Adapter	Dimension (mm)
106481010x	12 port plastic box	8 Port	12 Port	12 Port	130 x 125 x 28.8
106481011x	24 port plastic box	-	-	24 Port	130 x 125 x 28.8
106481012x	24 port metal box	-	-	24 Port	130 x 105 x 28.8

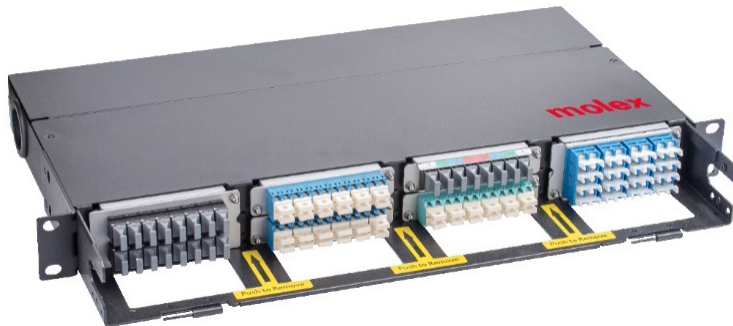
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High Density Fiber Enclosure

Molex 106480000x enclosure series are specifically designed for high density fiber and cable management system. The ideal choice for data center, storage area network (SAN), local area network (LAN) and central office / headend application. 106480000x shelf rack are used to breakout MPO cable to LC connectors. It's compact size and supported to 12/24 ports LC output. 106480000x supports maximum 192 LC ports with 1RU height.



- 1U 19" rack mountable
- Be applicable to Molex super high density MPO-LC cassette
- 12 MPO cassettes, 144 port of LC connector capacity



- 1U 19" rack mountable
- Compatible with Molex super high density MPO-LC cassette
- 8 MPO pre-termination cassettes, 192 port of LC connector capacity
- 8 MPO cassettes capacity, each cassette support 8 MPO adapter
- 4 CS cassettes capacity, 256 port of Cs connector capacity
- Cable management at front panel

High Density Rack Mount Fiber Enclosure

PN	Description	Maximum Capacity				Dimension (mm)
		Fiber Ports	LC Module	MPO Module	CS Module	
1064800001	HD 1RU	LC 144	12	12	LC	430 x 282 x 44
1064800006	SHD 1RU	LC 192	8	8	4	430 x 282 x 44

Pre-terminated High-Density Cassettes

Molex high density cassette are specifically designed to meet high density enclosure and cable management system. The maximum connector capacity allows 24 LC fiber port and each series of HD cassette have special pluggable pin for easy installation. The MPO/ MTP cassette modules provide secure transition between MPO/MTP and LC discrete connectors. They are used to interconnect MPO/MTP backbones with LC patching Pre-terminated and tested, these MPO modules provide instant field connections with guaranteed quality and performance. MPO cassette are available for 12/24MPO-LC with SM and OM3/OM4 options. Modular system allows for rapid deployment of high density data center infrastructure as well as improved troubleshooting and reconfiguration during moves, adds and changes.

(Refer attached¹ for specification of optical performance)

- Pre-terminated and pre-tested module
 - Metal box with quad LC adapter support 12 LC output
 - Apply to Molex 106480001 High-Density enclosure
 - Designed for 10G/40G/100G system migration
 - TIA-568 Polarity A (Default), B or C
-
- Pre-terminated and pre-tested module
 - Metal box with simplify LC adapter support 24 LC output
 - Apply to Molex 106480006 Super High-Density enclosure
 - Designed for 10G/40G/100G system migration
 - TIA-568 Polarity A (Default), B or C
-
- Pre-terminated and pre-tested module
 - Metal box with MPO adapter support 8 MPO output
 - Apply to Molex 106480006 Super High-Density enclosure
 - Designed for 100G/200G/400G system migration
-
- Pre-terminated and pre-tested module
 - Metal box with CS adapter support 64 fiber output
 - Apply to Molex 106480006 Super High-Density enclosure
 - Designed for 100G/200G/400G system migration



PN: 106481000x Series



PN: 106481001x Series



PN: 106481002x Series

Capacity of High Density Cassette

PN	Description	Front Type			Rear Type	Dimension (mm)
		LC ports	MPO ports	CS ports	MPO Port	
106481000x	HD 12F LC Cassette	12	-	-	1	149 x 85 x 11.5
106481001x	SHD 24F LC Cassette	24	-	-	2	137 x 80.5 x 18
106481002x	MPO Tap Tray	-	8	-	-	137 x 80.5 x 18
106481003x	LC Tap Tray	24	-	-	-	137 x 80.5 x 18
106481004x	LC-MPO Tap Tray	24	-	-	4	137 x 80.5 x 18
106481005x	CS Tap Tray	-	-	64	-	



PN: 106481005x Series

Indoor Distribution Box

Molex provides high bandwidth and physical infrastructures in data center, enterprise, and campus networks with comprehensive fiber optic systems that deliver high performance, reliability and scalability. By leveraging its technology leadership, innovative design and cable management expertise, Molex provides a migration path of future requirement. Fiber distribution box comes in different configurations such as rack mount, wall mount, and indoor or outdoor. The rack mount enclosures come in two flavors. One is the slide-out variety, and the other incorporates a removable lid.

With the precise fiber optic adapters are installed into the cut outs in the adapter panel to accept the various fiber optic connectors. Fiber optic pigtails, mate with the adapters and the fusion-spliced tails are stored on the splice trays.

- 1U 19" rack mountable and 1RU height
- Aluminum housing, powder coating, beige color
- Front and rear access.
- 12 fusions per splice tray and fiber routing spool
- Design for 19" standard rack and 1.5RU height
- Adaptor panel and splice trays are mounted on slidable drawer
- Front and rear access.
- Cable routing spools for storing excess cable
- Design for 4RU 19" standard rack
- Fixed adaptor panel mounted on slidable drawer
- Independent compartment for splice trays
- Cable routing spools for storing excess cable
- Top, bottom, side cable entries
- Six adaptors per panel FC, SC, ST adaptors
- 30/70 split door design. Ease to install for limited environment
- Cable routing spools provided to take up excess cable length
- Modular splice holder of six splice



PN: 106480020x Series



PN: 106480021x Series



PN: 106480022x Series

Patch Panel Distribution Box

PN	Description	Maximum Capacity				Dimension (mm)
		SC adapter	FC adapter	LC duplex	LC Quad	
106480020x	1RU Patch Panel	24	24	24	12	430 x 320 x 78.2
106480021x	Slidable 1RU Rack	24	24	24	12	430 x 320 x 36
106480022x	4RU Patch Panel	96	96	96	48	430 x 320 x 131.8
106480023x	6RU Patch Panel	48	32	48	24	430 x 320 x 131.8
106480030x	Wall Mount	24	24	24	12	430 x 75 x 350

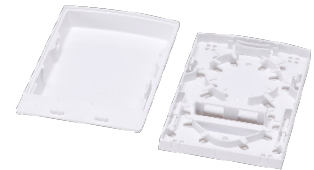


PN: 10648030x Series

Outdoor Plant Distribution Box

Molex optical terminal box allows simple and safety conditions of installation. All outdoor boxes follow IP65 rated and good for UV/rainfall resistant. It has been modular, scalable design provides flexibility for network partitioning and future growth. Outdoor plant distribution box is applied for installing pigtail and protects fiber optical splices and used as a termination point for the feeder cable to connect with drop cable in FTTx communication network system. We also support the box inside pre-assembly technology to offer a full plug-and-play termination solution for in- building fiber applications.

- Plastic box
- The maximum capacity allows 2-4 fibers (SC simplex/LC duplex)
- Support pigtail and splices pre-assembly
- Indoor/outdoor terminal application
- Plastic box with IP65 rated
- The maximum capacity allows 16-32 fibers (SC simplex/LC duplex)
- Support pigtail, splices, WDM and switch pre-assembly
- Indoor/outdoor terminal application
- Plastic box with IP65 rated
- The maximum capacity allows 2-4 fibers (SC simplex/LC duplex)
- Tray to ensure the regularity of the fiber within the connection tray
- Indoor/outdoor terminal application
- Plastic box with IP65 rated
- The maximum capacity allows 4-8 fibers (SC simplex/LC duplex)
- Tray to ensure the regularity of the fiber within the connection tray
- Suitable for basement, room and building's outer walls application
- Suitable for all network applications in butt configuration on cut and uncut FO cable
- Supports standard loose tube or ribbon fiber cables in either armored or dielectric configuration
- Versatile mounting brackets support strand, pole, pedestal, wall and hand hole environments
- Fully sealed to protect fiber and splices ensuring longevity
- Fast and easy insertion of branching cables on demand without special tools



PN: 106482008x Series



PN: 106482000x Series



PN: 106482002x Series



PN: 106482004x Series

Capacity of High Density Cassette

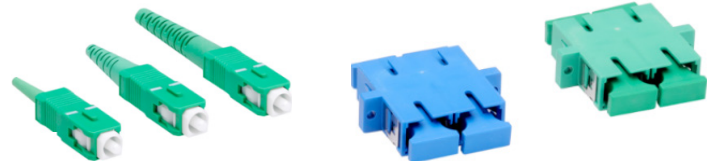
PN	Maximum Capacity		Dimension (mm)
	SC Ports	LC Ports	
106482000x Series	16	32	320 x 260 x 90
106482002x Series	2	4	165 x 100 x 30
106482004x Series	4	8	191 x 120 x 44
106482008x Series	2	4	84x130x24

Molex SC / LC / CS Connectivity

Molex presents innovative secure lock SC / LC adapters for advanced data center and FTTX applications. The unique adapter lock mechanism is designed for preventing accidental fiber disconnection of important channel links. The renewal SC, LC adapter housing is molded into one piece, with more enhanced precision, structure, and reliable performance. SC lockable adapter also provided inner shutter option, it's avoided visual harm. All Molex LC adapters are fully complied with IEC 61754-20 standards. The reliability of adapter completely meets Telcordia GR-326-CORE and TIA/EIA requirements.

SC Series

- Meets EIA/TIA, IEC and NTT-SC* standards
- Variety of colors and boot styles
- Excellent repeat IL variation built in by mechanical design
- The shutters of internal type adapters automatically open/close



Color	Type	Boot Type
Blue	SM	3.0mm
Green	MM	2.0mm
Red		900um
Specific		

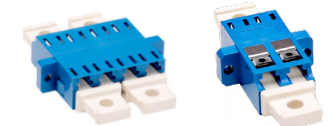
Color	Ports	Type
Blue	Simplex	General
Green	Duplex	Lockable
Red	Flange	Inner shutter
Specific	Flangeless	

LC Series

- Accepts eight simplex connectors, four duplex connectors or a combination of the two for design flexibility
- Excellent repeat IL variation built in by mechanical design
- Tested to Telcordia GR-326 and Compliant to TIA/ EIA-604-10A (FOCIS-10)



Color	Type	Boot Type
Blue	SM	3.0mm
Aqua	MM	2.0mm
Green		Short 2.0mm
Beige		900um
Specific		Mini 900um



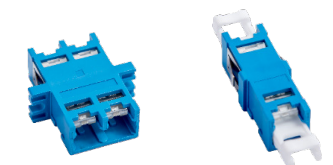
Color	Ports	Type
Blue	Simplex	General
Green	Duplex	Lockable
Red	Flange	Inner shutter
Specific	Flangeless	

CS Series

- IEC random mating Grade B
- Designed for OSFP/QSFP-DD Break out application
- The push-pull tab for superior manageability in high density applications
- 40% size reduction compared to LC Duplex
- Compliant with RoHS/REACH



Color	Type	Pull Tab Type
Blue	SM	48mm
Aqua	MM	55mm
Specific		62mm
		69mm

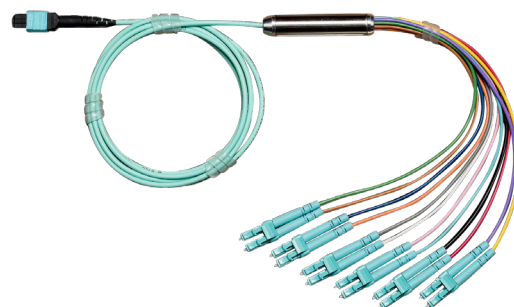


Color	Ports	Type
Blue	1 channel	General
Aqua	2 channels	
Specific	8 channels	
	Flange	
	Flangeless	

Harnesses MPO Cables

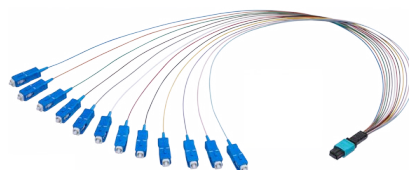
Molex's MTP/MPO product family utilizes push-pull connector housings for quick and reliable connections. There are three jacket types available, round cable, flat cable and bare fiber ribbon. The primary benefit of the round ribbon cable is realized when used with multiple ribbons within a single jacket. Using round ribbon cables allows installers greater flexibility when routing multiple jacketed cables in dense system networks. MTP/MPO cables are offered for various applications for all networking and device needs like 100G modules including CFP, CFP2 and CFP4 series.

- Reliable high-density, high-performance interconnections
- 8/12/24 fiber counts available
- Data communications networks, high bandwidth equipment
- Telcordia GR-1435-CORE qualification
- IEC 60794, TIA/EIA-568 compliant
- 8,12 and 24 fiber connector terminations and assemblies
- Assemblies MPO to MPO, MPO to non-terminated stub
- Easy to fiber routing or cassette assembly
- Telcordia GR-1435-CORE qualification
- IEC 60794, TIA/EIA-568 compliant
- TIA-568 Type A, B, or C fiber polarity option
- 40G SR4 / 100G SR10 application
- Uni-boot LC, Flexible boot LC option
- 900um, 2mm fan-out tubing available
- Transition from trunk backbone assemblies to fiber rack system
- 900um Tubing exposed from MPO / MTP connector
- Without fan-out kits easy to installation
- Convenient to MPO cassette fiber routing
- Compact size and save space
- 8 and 12 fiber connector terminations and assemblies
- IEC 60794, TIA/EIA-568 compliant



Harnesses MPO / MTP Assembly

12 counts fiber MPO-MPO assembly				
Fiber	Jacket	OD	Cable Type	IL
G652D/G657A1 OM3/OM4/Specify	LSZH / PVC / PE	3mm / Specify	Ribbon / Flat / Round	≤ 0.35dB (Low Loss) ≤ 0.75dB (Regular)
24 counts fiber MPO-MPO assembly				
Fiber	Jacket	OD	Cable Type	IL
G652D/G657A1 OM3/OM4/Specify	LSZH / PVC / PE	3.5mm/Specify	Ribbon/Flat/Round	≤0.35dB (Low Loss) ≤0.75dB (Regular)



Harnesses MPO / MTP to Tubing Fan-out Assembly

12 counts fiber MPO-LC/SC Fan-out assembly				
Fiber	Jacket	OD	Cable Type	IL
G652D/G657A1 OM3/OM4/Specify	LSZH / PVC / PE	3mm/Specify (Main) 0.9/1.6/2.0mm (Fan-out)	Ribbon/Flat/Round	≤0.35dB (Low Loss) ≤0.75dB (Regular) ≤0.25dB (SC, LC)
24 counts fiber MPO-MPO assembly				
Fiber	Jacket	OD	Cable Type	IL
G652D/G657A1 OM3/OM4/Specify	LSZH / PVC / PE	3.6 mm/Specify (Main) 0.9/1.6/2.0mm (Fan-out)	Ribbon/Flat/Round	≤0.35dB (Low Loss) ≤0.75dB (Regular) ≤0.25dB (SC, LC)

Fiber Ferrule MPO/MTP® Loopback

- Female and Male MPO/MTP option of Connectors
- Polarity Varints selection
- 40G QSFP+ and 100G CXP/CFP transceivers testing
- Pre-Terminated and Tested
- Pull tabs are ideal for easy mating and de-mating in highly congested applications
- Push/Pull tab connectors offer maximum accessibility in high density installations and install / remove with one hand
- High-density design cuts down on installation costs
- Specify color for quality control and traceability
- Bend any angle and direction free
- Tight bend radius and custom cable exit paths in rack-to-rack applications
- Ideal for QSFP+, CFP, and future 400G networks using MT based interconnects
- Improves the cable routing and avoidance of disturbing adjacent cables



MPO Trunk Cables

MPO trunk cables are designed for data center solutions supporting the topologies as specified in the data center standards EN50173-5. The MPO multi-fiber trunk cables are terminated with different fiber mode, fiber counts, customized cable configuration. 24 fiber to 144 fiber counts, 10G, 40G and 100G configurations are available. Complied with the standard TIA-568C it is widely used in the pre-terminated system of the IDC and block. It is also available to the updated system for 40G/100G in the future. MPO trunk cable helps to fast installation for data center and other fiber optic environment. Its efficient plug and play structure which can significantly lower the installation and daily maintenance costs surpasses MDA, HDA and EDA regional module cassette or fan-out fiber connections.

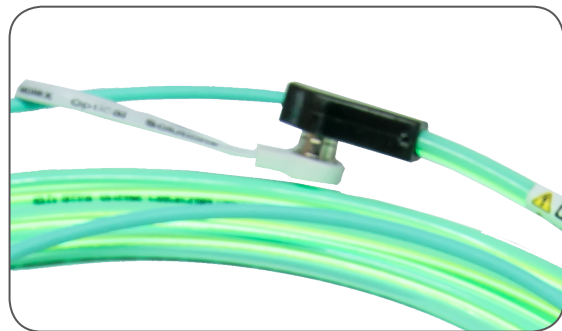
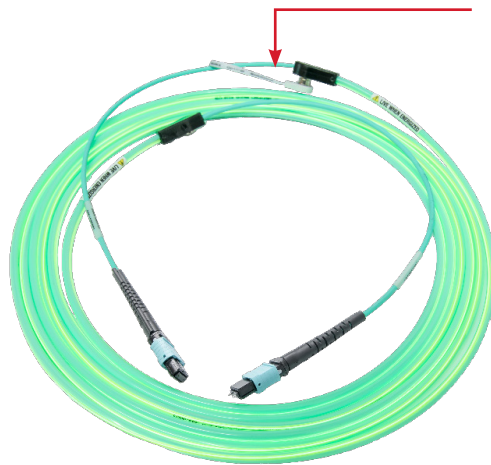


- Easier upgradability to 40G and 100G with MPO pre-term solutions
- Faster installation with pre-terminated solutions
- Reel and default pulling eye for easier installation
- EC 60794, TIA/EIA-568 compliant
- SM/OM3/OM4 cables are available

Characteristic		48F (12Fx4)	72F (12Fx6)	96F (12Fx8)	144F (12Fx12)
Fiber Type		Corning G652D / OM3 / OM4 or Equivalent			
Dispersion (ps/(mm.km))		$\leq 18@1550\text{nm}$ / $\leq 22@1625\text{nm}$			
Fiber Attenuation		$\leq 0.35\text{dB}@1310\text{nm}$ / $\leq 0.25@5505\text{nm}$			
Max Load (N)		Long term 200 / Short term 660			
Outer Jacket Diameter (mm)	Indoor	10.0 $\pm$ 0.2	11.6 $\pm$ 0.5	12.0 $\pm$ 0.5	18.6 $\pm$ 0.5
	Outdoor	11.0 $\pm$ 0.2	12.6 $\pm$ 0.5	15.0 $\pm$ 0.5	18.6 $\pm$ 0.5
Outer Jacket Material	Indoor	OFNP			
	Outdoor	PE			
Outer Jacket Color		Yellow / Black / Aqua			
Inner Jacket Diameter(mm)		3.0 $\pm$ 0.1			
Inner Jacket Color		Yellow / Aqua			
Cable Attenuation		$\leq 0.4@1310\text{nm}$ / $\leq 0.3@1550\text{nm}$			
Operating Temperature	Indoor	-20°C ~ +75°C			
	Outdoor	-40°C ~ +85°C			
Storage Temperature		-40°C ~ +85°C			

LumaLink Optical Trace Cable

Data centers often have hundreds of cables, making cable management difficult. Maintenance and testing can be especially difficult when cables are a tangled mess. LumaLink Optical Trace Cables make cable management easier. When the function is turned on, the cable is illuminated from end to end, making cable mapping easier. When data center managers need to upgrade cables, not being able to tell if there's slack can complicate the procedure. LumaLink Optical Trace Cables' illumination feature will enable data center managers to determine how long a cable is and make it easier to know the best way to manage upgrades. As data centers transmit an ever-increasing amount of data at ever-increasing speeds, real estate becomes constrained and cable management becomes a challenge. LumaLink Optical Trace Cables use an MPO connector, which supports high-density data center applications while maintaining a small form factor.



Magnetic power connection for illumination function. Two on each end of the cable assembly

Provides full-length cable illumination. Capable of 360° rotation. Offers easy self-latching attachment

Fiber Ferrule MPO/MTP® Loopback

- 8/12 fiber connector terminations and assemblies
- Assemblies MPO to MPO, MPO to non-terminated stub
- Cable illumination from origin to endpoint
- Magnetic power connection for illumination function. Two on each end of the cable assembly
- Telcordia GR-1435-CORE qualification
- IEC 60794, TIA/EIA-568 compliant

LumaLink Optical Trace Cable Assembly		
Fiber Type	SM / OM4 / OM4+	
Max Load (N)	10 to 20N (MPO/MTP)	
Jacket Diameter (mm)	Translucent Jacket	4.5mm
	Inner Jacket	3.0mm
Inner Jacket Color	Aqua	
Housing Colors	Aqua, Green or Black, Others Upon Request	
Insertion Loss (IL) (max.)	Single-mode	-0.5 dB
	Multi-mode	-0.75 dB
Return Loss (RL) (max.)	Single-mode	-20 dB
	Multi-mode	-55 dB
Operating Temperature	-10°C ~ +60°C	

TIA-568 Fiber Polarity Overview

ANSI/TIA-568 is a set of telecommunications standards from the Telecommunications Industry Association (TIA). The standards address commercial building cabling for telecommunications products and services. Molex MPO fiber polarity fully comply ANSI/TIA-568 standards.

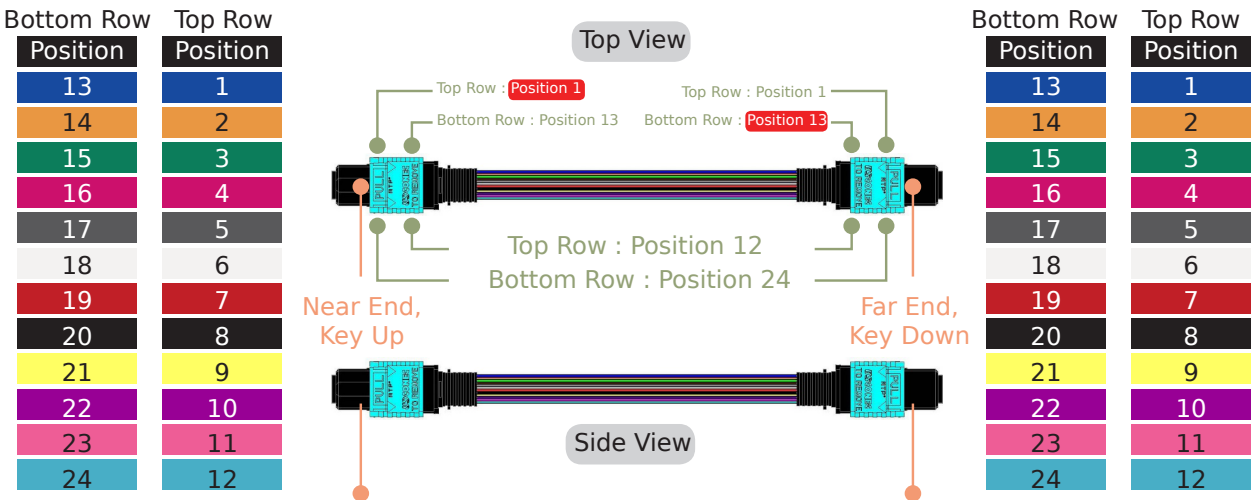
12 Fiber Counts Type A (Key-up to Key Down)



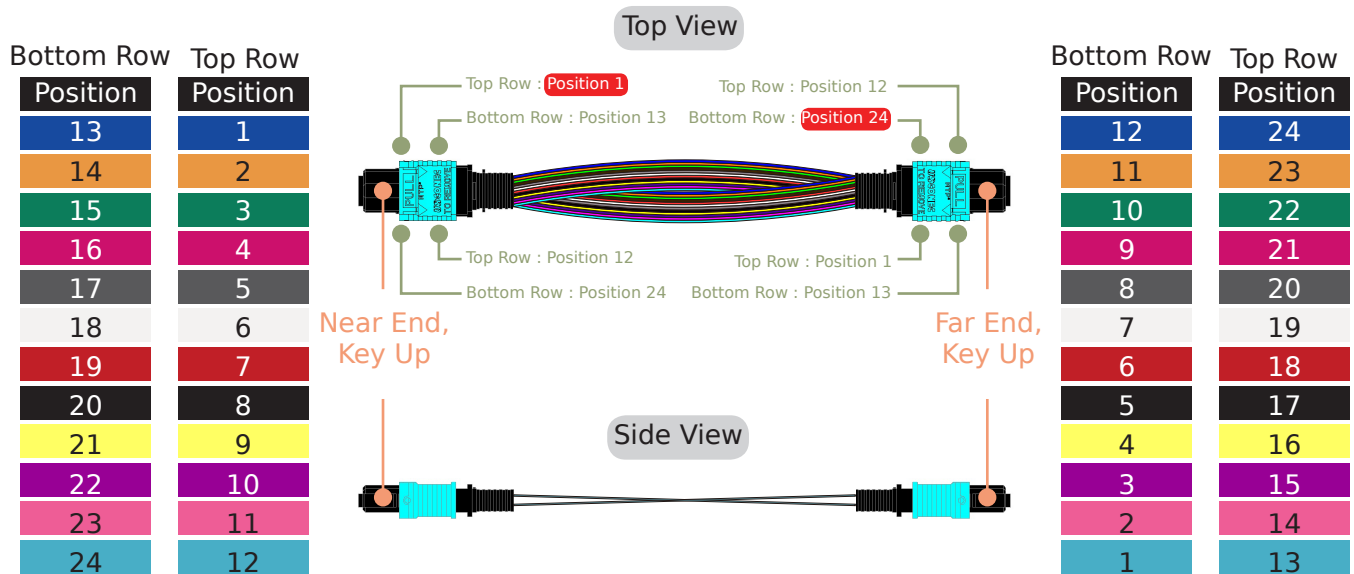
12 Fiber Counts Type B (Key-up to Key up)



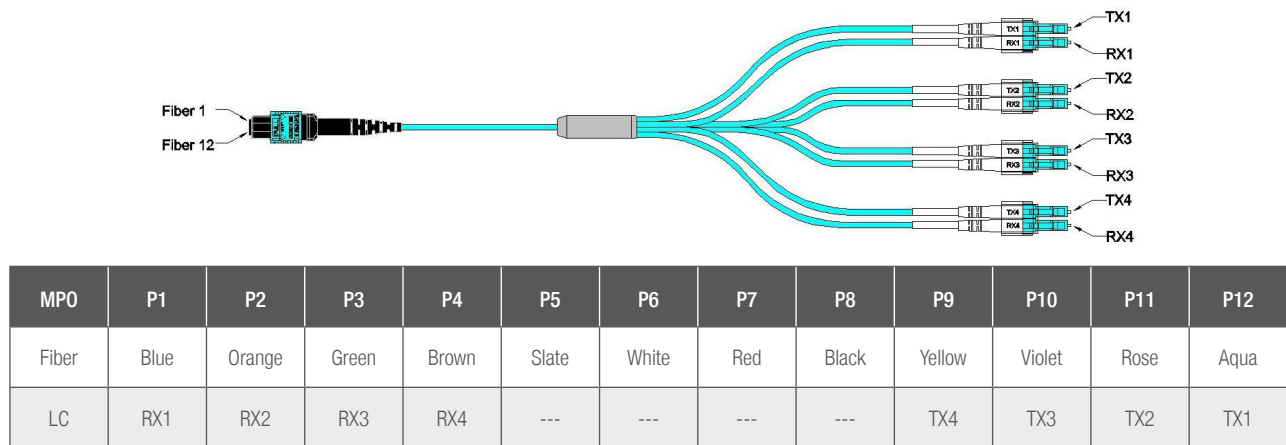
24 Fiber Counts Type A (Key-up to Key Down)



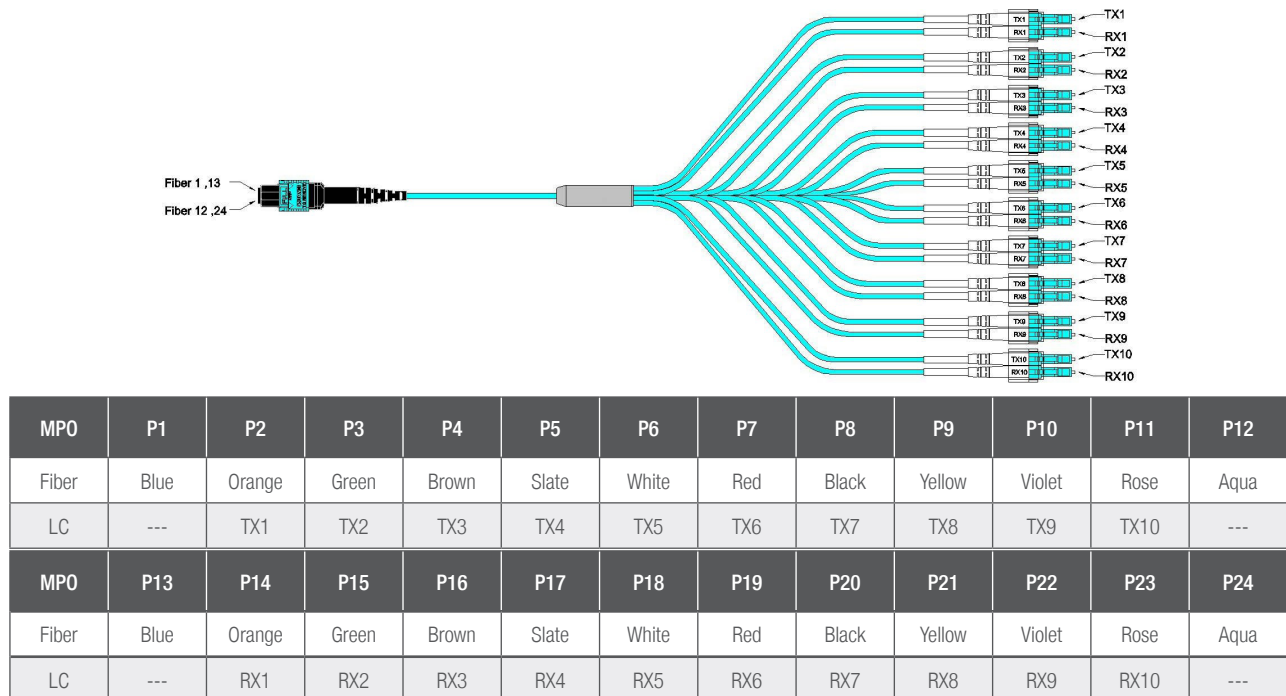
24 Fiber Counts Type B (Key-up to Key up)



MPO-LC Breakout SR4 Sketch



MPO-LC Breakout SR10 Sketch



Cable Assembly

Molex optical jumper cable is designed for interconnection for all optical systems or components. Molex offer a wide range of industrial standard jumper cables with various fiber and fiber jacket types, connectors, and lengths. With our highly integrated design and manufacturing capability, Molex can also provide customized products to help our customer for better opportunities. Our jumper cable complies with industry green initiative such as RoHs.

- Various option of fiber and connector types and lengths
- Environmental green plan compliance
- High reliability and stability
- 100% geometry inspection
- GR-326 CORE compliant



Parameters	Note	S Grade (Low Loss)	P Grade (Standard)	Unit
Operating Wavelength	Single-Mode	1260~1620		nm
	Multi-Mode	850 & 1310		
Insertion Loss (PC/UPC Type)	Single-Mode	0.15	0.25	dB
	Multi-Mode*		0.30	
Insertion Loss (APC Type)	Single-Mode		0.30	dB
Return Loss	Single-Mode PC Type	45		dB
	Single-Mode UPC Type	50		
	Single-Mode APC Type	60		
	Multi-Mode	35		
Connection Durability		500		
Connector Repeatability		0.2		
Operating Temperature		-20 ~ 70		
Fiber Type	Single Mode Fiber	SMF-28		
	Multi-Mode Fiber	50/125 μm		
		62.5/125 μm		

Accessories for Cable Management

The cable management accessories can help you get your work area organized and increase your productivity. Choose appropriate accessories, your equipment and your space will be easier to use and to keep tidy and clean.

Molex provides full series of fiber protection sleeves for optical fiber splice protection in field fiber splicing assembly, manufacturing, and optical fiber closure applications. The protection sleeves are categorized as single fiber and ribbon fiber type, and they are using different reinforcement rods.

Protection Sleeve

- Inner sleeve ethylene vinyl acetate provide moisture barrier after shrinkage
- Tension Member Stainless Steel Rod
- Min. shrink temperature 90°C (194° F)
- Working temperature: -55°C ~ +100°C
- Compliance with Telcordia GR-1380-CORE



Item	Outer Tube	Inner Tube	Steel Rod	Unit
Singer Fiber	POLYULEFIN	EAA	SUS 304	---
Ribbon Fiber	POLYULEFIN	EAA	CERAMIC	---
Operation Temp.Range		-55~105		°C

Molex offers 3 sizes of adaptor panel for fiber termination enclosures. They can be provided by various types of adaptor footprints with required quantity. Silk screen number printing service is available for customization products with minimum order quantity

Adapter Panel

- Modular construction
- Available for SC, LC, FC, ST, and dummy panels
- Nylatch Attachment, easy installation
- Aluminum sheet panel

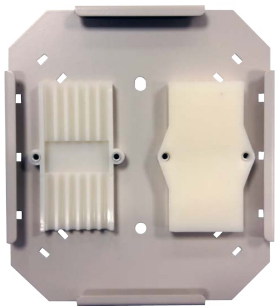
Molex offers fiber splice tray for standard FTR, FCP, and FTB enclosures. A single splice tray can be installed with 2 tube holders which can hold up to 16pcs of fiber splices in total.



Splice Tray

- Modular fiber splice holder
- Minimum fiber bending radius maintained
- Easy installation
- Aluminum sheet panel or plastic options
- 6/12/24 fiber port capacity are available

Molex offers cable routing spool for fiber enclosure, the spool can be installed into all Molex standard fiber enclosures for extra cable length storage



Cable Management Spool

- Flame retardant plastic 94V-0 high impact resistance at low temperature
- Minimum bending radius 40mm
- Two halves spool design, flexible to store required excess cable, by adjusting the location of spools
- Operating temperature: -20°C ~ +80°C



Others

- Universal Rack Mount 1.5" Grommet
- Patch Cord Bend Radius Bracket
- IP 68 Cable Gland
- Sealing hole cable Gland



Attachment 1

Molex's MTP cassettes include 1x12 fiber MTP to 12 LC, 2x12 fiber MTP to 24 LC and 1x24 fiber MTP to 24 LC cassettes. We offer either OM1 62.5/125, 50/125 10G OM3 or SM G657A fiber for these cassettes. These plug-and-play modules are the ultimate solution for data center high density cabling applications. All cassettes are available for MTP- LC Fanout assemble-polarity type A and B.

MTP Cassette Fan-out Specification

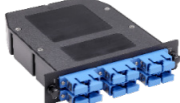
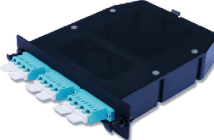
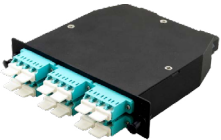
Item	Parameters	Note	Min	Typ.	Max	Unit
1	Operating Wavelength ¹	Single-Mode	1310 /1550			nm
		Multi-Mode	850			
2	Insertion Loss ^{1,2} (MTP side)	Single-Mode	Standard		0.75	dB
			Elite		0.35	
		Multi-Mode	Standard		0.6	
			Elite		0.35	
3	Insertion Loss ^{1,2} (Fan-out side)	Single-Mode	PC		0.2	dB
			APC		0.3	
		Multi-Mode	PC		0.3	
4	Return Loss ^{1,2}	Single-Mode		60		dB
		Multi-Mode		N/A		
5	Return Loss ^{1,2}			50		dB
				60		
				N/A		
6	Operating Temperature			-20	70	C

Note:

1. Single-mode loss test to be performed at 1310nm and 1550nm. Multimode loss test to be performed at 850nm. IL and RL must be tested at room temperature. (Multimode RL testing is not required.)
2. Consistent optical performance for multimode (flat protruded polish) and single-mode (Angled protruded polish).

Attachment 2 – PN Information

Standard LGX Fiber Enclosure Series

PN	TYPE	DESCRIPTION	IMAGE
1064800100	Cassette	1U Rack Mount for 3 LGX Cassette (w/o cassette)	
1064800101	Cassette	2U Rack Mount for 6 LGX Cassette (w/o cassette)	
1064800102	Enclosure	3U Rack Mount for 12 LGX Cassette (w/o cassette)	
1064800103	Enclosure	4U Rack Mount for 12 LGX Cassette (w/o cassette)	
1064810100	Cassette	Plastic cassette, SM G657A1 1*12F MTP (Male, Elite) - SC/PC fanout	
1064810101	Cassette	Plastic cassette, SM G657A1 1*12F MTP	
1064810102	Cassette	Plastic cassette, OM3 1*12F MTP	
1064810103	Cassette	Plastic cassette, OM4 1*12F MTP	
1064810110	Cassette	Plastic cassette, SM G657A1 2*12F MTP	
1064810112	Cassette	Plastic cassette, OM3 2*12F MTP	
1064810114	Cassette	Plastic cassette, OM4 2*12F MTP	
1064810111	Cassette	Plastic cassette, SM G657A1 1*24F MTP	
1064810113	Cassette	Plastic cassette, OM3 1*24F MTP	
1064810115	Cassette	Plastic cassette, OM4 1*24F MTP (Male, Elite) - LC/PC fanout	
1064810120	Cassette	Metal cassette, SM G657A1 2*12F MTP (Male, Elite) - LC/PC fanout	
1064810122	Cassette	Metal cassette, OM3 2*12F MTP	
1064810124	Cassette	Metal cassette, OM4 2*12F MTP	
1064810121	Cassette	Metal cassette, SM G657A1 1*24F MTP	
1064810123	Cassette	Metal cassette, OM3 1*24F MTP	
1064810125	Cassette	Metal cassette, OM4 1*24F MTP	

Standard LGX Fiber Enclosure Series

PN	TYPE	DESCRIPTION	IMAGE
1064800001	Enclosure	1RU 144C High-density fiber enclosure (w/o cassette)	
1064810000	Cassette	Metal Slim cassette, SM G657A1 1*12F MTP (Male, Elite) - LC/PC fanout	
1064810001	Cassette	Metal Slim cassette, OM3 G657A1 1*12F MTP (Male, Elite) - LC/PC fanout	
1064810002	Cassette	Metal Slim cassette, OM4 G657A1 1*12F MTP (Male, Elite) - LC/PC fanout	

Xtreme Fiber Enclosure Series

PN	TYPE	DESCRIPTION	IMAGE
1064800006	Enclosure	1RU Xtreme fiber enclosure (w/o cassette)	
1064810013	Cassette	Metal cassette, SM G657A1 2*12F MTP (Male, Elite) - LC/PC fanout	
1064810014	Cassette	Metal cassette, OM3 2*12F MTP (Male, Elite) - LC/PC fanout	
1064810015	Cassette	Metal cassette, OM4 2*12F MTP (Male, Elite) - LC/PC fanout	
1064810020	Cassette	Metal cassette, 8 *MTP/MPO adapter empty cassette	
1064810030	Cassette	Metal cassette, SM 24*LC adapter empty cassette	
1064810031	Cassette	Metal cassette, MM 24*LC adapter empty cassette	
1064810040	Cassette	Metal cassette, SM 4*MTP/MPO to 24 *LC adapter empty cassette	
1064810041	Cassette	Metal cassette, MM 4*MTP/MPO to 24 *LC adapter empty cassette	
1064810022	Cassette	Metal 2W cassette, 16 *MTP/MPO adapter empty cassette	
1064810050	Cassette	Metal 2W cassette, 64 *CS adapter empty cassette	

CS Adapter Series

PN	TYPE	DESCRIPTION	IMAGE
1060291001	Flange/Blue	CS 2F SINGLE CHANNEL W/FLG BLUE ADAPTER	
1060291002	Flangeless/Blue	CS 2F SINGLE CHANNEL O/FLG BLUE ADAPTER	
1060291004	Flange/Aqua	CS 2F SINGLE CHANNEL W/FLG AQUA ADAPTER	
1060291003	Flangeless/Aqua	CS 2F SINGLE CHANNEL O/FLG AQUA ADAPTER	
1060291011	Flange/Blue	CS 4F DUAL CHANNEL W/FLG BLUE ADAPTER	
1060291012	Flangeless/Blue	CS 4F DUAL CHANNEL O/FLG BLUE ADAPTER	
1060291013	Flange/Aqua	CS 4F DUAL CHANNEL W/FLG AQUA ADAPTER	
1060291014	Flangeless/Aqua	CS 4F DUAL CHANNEL O/FLG AQUA ADAPTER	

CS Jumper Series

PN	TYPE	DESCRIPTION
1060292001	SM, G657A1	CS-CS UPC 2.0mm SM JUMPER, 1M
1060292002	SM, G657A1	CS-CS UPC 2.0mm SM JUMPER, 2M
1060292003	SM, G657A1	CS-CS UPC 2.0mm SM JUMPER, 3M
1060292004	SM, G657A1	CS-CS UPC 2.0mm SM JUMPER, 4M
1060292005	SM, G657A1	CS-CS UPC 2.0mm SM JUMPER, 5M
1060292006	SM, G657A1	CS-CS UPC 2.0mm SM JUMPER, 6M
1060292007	SM, G657A1	CS-CS UPC 2.0mm SM JUMPER, 7M
1060292008	SM, G657A1	CS-CS UPC 2.0mm SM JUMPER, 8M
1060292009	SM, G657A1	CS-CS UPC 2.0mm SM JUMPER, 9M
1060292010	SM, G657A1	CS-CS UPC 2.0mm SM JUMPER, 10M

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